

REMARKS

Claims 1-19 are all the claims pending in the application. By this Amendment, Applicant amends claims 1 and 8 to further clarify the invention and adds claims 20-25, which are clearly supported throughout the specification *e.g.*, Fig. 2, ¶¶ 26-27 of the specification.

I. Summary of the Office Action

The Examiner rejected claims 1-19 under 35 U.S.C. § 112, first paragraph and under 35 U.S.C. § 103(a).

II. Claim Rejections under 35 U.S.C. § 112, First Paragraph

Claims 1-19 are rejected under 35 U.S.C. § 112, first paragraph. Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

The Examiner alleges that “determining format for the parameters of the entered instructions based on said correlating” as set forth in independent claims 1 and 8 introduces new subject matter and is not described in the original specification (*see* page 3 of the Office Action). The Examiner further alleges that the closest exemplary embodiment is in ¶¶ 29-30 of the specification. Applicant respectfully disagrees.

Paragraphs 25 and 26 of the specification describe an exemplary embodiment of the present invention. For example, an exemplary embodiment describes “...a correlation component 30, which compares this text with the limited and stored command set 31 to determine, for example, the start address for the subroutine corresponding to the command and to write it into the command memory 32” (¶ 29). In fact, an exemplary embodiment describes that the computer can determine the desired function by comparing voice entry 12 with complete command set. Once this has been done, the computer, based on additional information available

regarding this command, detects that this command requires at least two parameters. A format memory may also contain additional information *e.g.*, a word that would be spoken between the two parameters (§§ 26 and 27).

It will be appreciated that the foregoing remarks provide an exemplary embodiment, the remarks are not necessarily limitative of any claims.

Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 1-19.

III. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1, 2 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,871,179 to Kist et al. (hereinafter “Kist”), in view of U.S. Patent No. 6,937,984 to Morgan et al. (hereinafter “Morgan”). Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Of these rejected claims, only claims 1 and 8 are independent. Independent claim 1 recites:

entering the function of the instruction as a verbal input via the voice recognition system, acknowledging the verbal input of the function of the instruction via the manual input, after the acknowledging of the entered function of the instruction, correlating the entered function of the instruction with a stored set of instructions;
determining format for the parameters of the entered function based on said correlating; and
after said acknowledging, entering the parameters of the instruction as a further verbal input via the voice recognition system,
wherein the determining of the format for the parameters is prior to the parameters being entered as the further verbal input.

It is disclosed that in conventional techniques, such as office applications, input of information has been optimized in that voice entries are recognized and converted to text. However, this technique could not be successfully expanded to include iterative functions required in creating a program. An exemplary, non-limiting embodiment of the present invention, therefore, provides an improved technique for creating analog programs such as ladder diagrams. In particular, in creating analog electric circuit diagrams, a large number of control commands must be entered instead of continuous text. This requires the selection as well as the arrangement and linkage of different control elements, which is accomplished by means of successive instructions that the computer has to recognize and execute correctly. Since most of such instructions have parameters, it is not normally possible to define a complete statement within which the desired function including the parameters would then have to be found in the conventional techniques. Rather, especially in the creation of programs, variables are frequently used, which relate to the corresponding application and therefore expand the instruction vocabulary to include almost the entire language vocabulary and more. The correct understanding and the correct processing of functions, parameters, data and variable names in the creation of programs has so far presented an input-related problem in conventional techniques.

According to an exemplary, non-limiting embodiment of the present invention, however, a sequenced operation is provided, where first a command is input via voice and the user manually presses an enter button to designate end of the command. Once the command is recognized, additional information such as parameters that may be required for this command is found and the system waits for further user input of these parameters. When the parameters are input (via voice and enter button), they are interpreted in accordance with the obtained format of

the required additional information. Accordingly, the analog programs such as ladder diagrams may be created more efficiently via voice input.

It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

The Examiner's position, as best understood, can be summarized as follows. Kist discloses the above-noted unique features of claim 1 except for the acknowledgement, which is allegedly disclosed by Morgan. Specifically, the Examiner appears to allege that since Morgan discloses that manual input may be required at some stage, this allegedly suggests manual input between the command and parameters, despite Kist's disclosure to the contrary and despite Morgan's teaching away from manual input (*see* pages 4-5 of the Office Action). Applicant respectfully disagrees for at least the following exemplary reasons.

Applicant respectfully submits that the combined disclosures of Kist and Morgan do not suggest inputting function and parameters separately, where the verbal input of the function is acknowledged via manual input. That is, claim 1 requires acknowledgement of the function prior to the parameter input and not "*some*" acknowledgement at "*some*" time as alleged by the Examiner. That is, where to place an acknowledgement is a mere speculation by the Examiner based on improper hindsight at least because the prior art made of record does not disclose or suggest acknowledgement prior to the parameter input. If the two references would have been combined, then the acknowledgement would take place after the entire utterance is recorded (that includes commands and parameters) as disclosed in Kist.

Kist discloses a process to distinguish between dictation and commands. In particular, Kist discloses a method and a system for recognizing and executing a voice command that has a

dictation portion. Upon receiving user input, the spoken utterance is processed to identify a pattern of words which matches a pre-determined command pattern. Then, the computer system command is identified that corresponds to the pre-determined command pattern and has at least one parameter. The parameter is extracted from a dictation portion of the spoken utterance which is separate from the pattern of words matching the command pattern. The computer system command is then processed to perform an event in accordance with the parameter. If the spoken utterance does not contain a pattern of words matching a pre-determined command pattern, then the spoken utterance is recognized as dictation and inserted at a specified location into an electronic document or other system or application software (*see* Abstract, col. 2, line 56 to col. 3, line 24; col. 7, lines 42 to 60).

Kist, however, does not disclose or even remotely suggest having the command and parameters being input separately. In Kist, the system receives user input corresponding to the spoken utterance and this input is parsed so as to obtain the command if it is present in the spoken utterance. In other words, Kist does not disclose or even remotely suggest inputting via speech the parameters and commands separately.

In addition, Kist clearly does not disclose or even remotely suggest determining parameters for the entered function prior to the entry of the parameters. That is, Kist does not disclose or even remotely suggest that determining format of further verbal input based on the correlation of the instruction with the function. Kist is no different from the conventional techniques in that it simply discloses parsing input voice data and not determining the format for future verbal data based on the correlated input function.

Furthermore, Kist does not disclose or even remotely suggest, as acknowledged by the Examiner, acknowledging via manual input receipt of the command, and only after the acknowledgement, receiving the parameters.

The Examiner contends that Morgan cures the deficient disclosure of Kist. Morgan, however, clearly teaches away from having manual confirmations. Specifically, Morgan states in col. 2, lines 16 to 36:

Many of the deficiencies in speech recognition, both in word processing and in command technologies, are due to inherent voice recognition errors due in part to the status of the technology and in part to the variability of user speech patterns and the user's ability to remember the specific commands necessary to initiate actions. As a result, most current voice recognition systems provide some form of visual feedback which permits the user to confirm that the computer understands his speech utterances. In word processing, such visual feedback is inherent in this process since the purpose of the process is to translate from the spoken to the visual. That may be one of the reasons that the word processing applications of speech recognition have progressed at a faster pace. In any event, in all voice recognition systems with visual feedback, at some stage, the interactive user is required to make some manual input, e.g. through a mouse or a keyboard. The need for such manual operations still gets in the way of interactive users who, because of a lack of computer skills or other reasons, wish to relate to the computer system in a fully voice activated or conversational manner...(emphasis added).

In other words, one of the problems, Morgan's invention attempts to resolve is requiring manual input via mouse or keyboard. In fact, Morgan states that "[m]annual I/O devices, such as the keyboard and the mouse, are shown primarily because they may be used for ancillary I/O functions not related to the present invention, which uses primarily spoken commands" (col. 4, lines 5 to 8). In short, as is clear, Morgan fails to cure the deficient disclosure of Kist at least

because it teaches away from the manual input. If one of ordinary skill in the art would have combined Kist with Morgan, then there would be no manual input as Morgan clearly discloses it as undesirable.

In addition, as explained above, no reason or suggestion is provided by the Examiner regarding where to place the manual input. Morgan does not disclose or even remotely suggest inputting via speech the parameters and commands separately or that the manual input should happen between the input command and the input parameters. In other words, Morgan does not disclose or even remotely suggest acknowledging via manual input receipt of function, and only after the acknowledgement, receiving the parameters.

Furthermore, if the two references are combined, the manual input would be made after entire entry i.e., since Kist clearly discloses inputting text and commands together. In other words, combining Kist with Morgan in the manner suggested by the Examiner would defeat the principle operation of Kist, which discloses trying to recognize the entire utterance as a command with all the needed elements for execution or otherwise treat the utterance as text.

For at least these exemplary reasons, claim 1 is patentable over Kist in view of Morgan. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 1 and its dependent claim 2.

In addition, Applicant respectfully notes that claim 2 recites additional features not addressed by the Examiner. Applicant respectfully submits that the prior art of record does not disclose or suggest at least the additional unique features set forth in claim 2. For at least these additional exemplary reasons, claim 2 is patentable over the prior art of record.

Next, independent claim 8 recites features similar to, although not necessarily coextensive with, the features argued above with respect to claim 1. Therefore, arguments

presented with respect to claim 1 are respectfully submitted to apply with equal force here. For at least substantially analogous reasons, therefore, independent claim 8 is patentable over Kist in view of Morgan.

Claims 3-5, 16, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist in view of Morgan, and further in view of U.S. Patent No. 6,510,414 to Chaves (hereinafter “Chaves”), claims 6, 7, 9-11, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist in view of Morgan, and further in view of U.S. Patent Publication No. 2002/0055844 to L’Esperance (hereinafter “L’Esperance”), claims 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist in view of Morgan and L’Esperance, and further in view of U.S. Patent Publication No. 2002/0123893 to Woodward (hereinafter “Woodward”), and claims 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kist in view of Morgan, and further in view of U.S. Patent No. 7,099,809 to Dori (hereinafter “Dori”). Applicant respectfully traverses these grounds of rejections at least in view of the following exemplary comments.

Claims 3-7 and 9-19 depend on claim 1 or 8. Applicant has already demonstrated that Kist and Morgan do not disclose all the features of independent claims 1 and 8. Chaves, L’Esperance, Woodward, and Dori do not compensate for the above-identified deficiencies of Kist and Morgan. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claims 1 and 8. Since claims 3-7 and 9-19 depend on claims 1 and 8, they are patentable at least by virtue of their dependency.

In addition, dependent claim 17 recites: “wherein the function of the instruction is a command for creating or editing a portion of an electric analog circuit diagram.” The Examiner

acknowledges that Kist and Morgan do not disclose or suggest the unique features of claim 17 but allege that Dori cures the above-identified deficiencies of Kist and Morgan (*see* page 13 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that Dori relates to creating a graphical model of a textual descriptions and vice versa (*see* Abstract and col. 1, line 38 to col. 2, line 40). However, Dori is unrelated to creating or editing a portion in an electric analog circuit diagram. That is, Dori does not disclose or suggest creating an automation program *i.e.*, the electric analog circuit diagram. In short, Dori does not cure the above-identified deficiencies of Kist and Morgan. For at least these additional exemplary reasons, claim 17 is patentable over the prior art of record. This argument remains unrebutted by the Examiner.

Dependent claim 18 recites “wherein the function of the instruction is a command for creating or editing a ladder diagram.” The Examiner acknowledges that Kist and Morgan do not disclose or suggest the unique features of claim 17 but allege that Dori cures the above-identified deficiencies of Kist and Morgan (*see* page 13 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that Dori discloses C++ programming language but there is no disclosure or suggestion of a ladder diagram. That is, Dori is unrelated to automation systems and as such does not disclose or suggest programs that are needed for creating these systems such as the ladder diagram. In short, Dori does not cure the above-identified deficiencies of Kist and Morgan. For at least these additional exemplary reasons, claim 18 is patentable over the prior art of record. This argument remains unrebutted by the Examiner.

In addition, dependent claim 19 recites: “recognizing the entered parameters based on the determined format.” None of the prior art of record discloses or suggests recognizing the entered parameters based on the determined format. The Examiner failed to address this unique aspect

of claim 19 (*see* page 8 of the Office Action). For at least these additional reasons, claim 19 is patentable over the prior art of record.

IV. New Claims

In order to provide more varied protection, Applicant adds claims 20-25, which are patentable by virtue of their dependency and for additional features set forth therein.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

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Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER



Nataliya Dvorson
Registration No. 56,616

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